FEDOT'YEV, N.P.; VYACHESLAVOV, P.M.; KRUGLOVA, Ye.G.; RUDNEVA, V.P.

Electrolytic deposition of tin-zinc alloys. Trudy LTI no.53:64-71 '59. (MIRA 14:3)
(Tin plating) (Tin-zinc alloys)
(Corrosion-resistant materials)

RUDNEVA, Ye. M.

RUDNEVA, Evgeniya Maksimovna, 1920-; YAKHONTOVA, Z., redaktor; GOLUBKOVA, G., tekhnicheskiy redaktor

[While the heart beats] Poka stuchit serdtse. [Moskva] Izd-vo TsK VLKSM "Molodaia gvardiia," 1955. 126 p. (MLRA 9:2)
(Women in aeronautics)

BOGATYREV, K.P.; VADKOVSKAYA, O.A.; GERASIMOV, I.P.; GERASIMOV, Iv.P.; YEROKHINA, A.A.; IVANOVA, Ye.N.; LETKOV, L.A.; LIVEROVSKIY, Yu.A.; LOBOVA, Ye.V.; NOGINA, N.A.; ROZOV, N.N.; RUDNEVA, Ye.N.; TKACHENKO, V.I.; UFIMTSEVA, K.A.; FRIDLAND, V.M.

Academician L.I.Prasolov; obituary. Izv.AN SSSR Ser.geog. no.2: 73-78 Mr-Ap '54. (MLRA 7:5)

(Prasolov, Leonid Ivanovich, 1875-1954)

RUDNEVA, Ye.N.

Genesis of brown forest soils in piedmont districts of Transcarpathia. Pochvovedenie no.10:62-72 O '57. (MIRA 10:12)

1. Pochvennyy institut im. V.V.Dokuchayeva AN SSSR.
(Transcarpathia--Forest soils)

RUDNEVA, Ye. N. Cand Agr Sci -- (diss) "The soil covering of the Zakarpatskaya Oblast." Mos, 1958. 22 pp with graphs. (Acad Sci USSR. Soil Inst im V. V. Dokuchayev), 150 copies (KL, 11-58, 119)

RUDNEVA, Yevgeniya Nikolayevna; IVANOVA, Ye.N., prof., doktor sel'skokhoz.nauk, otv.red.; TIKHOMIROV, V.N., red.izd-va; MAKOGONOVA, I.A., tekhn.red.

[Soils of Transcarpathia] Pochvennyi pokrov Zakarpatskoi oblasti. Moskva, Izd-vo Akad.nauk SSSR, 1960. 227 p. (MIRA 14:2)

1. Zaveduyushchaya Otdelom geografii i kartografii pochv Pochvennogo instituta AN SSSR (for Ivanova).
(Transcarpathia--Soils)

BOGATYREV, K.P.; IVLEV, A.M.; RUDNEVA, Ye.N.

Mountain soils of Sakhalin. Trudy Sakh. kompl. nauch.-issl. inst. AN SSSR no. 9:3-34 '60. (MIRA 14:4)
(Sakhalin--Soils)

RUDNEVA, Ye.N.

Research trip to southeastern Rumania. Pochvovedenie no.5:107-115 My '65. (MIRA 18:5)

ROZOV, N.N.; RUBILIN, Ye.V.; RUDNEVA, Ye.N.

General characteristics of the soils of the North American Continent; from materials of the Seventh International Congress of Soil Scientists. Pochvovedenie no.12:96-109 D '61. (MIRA 16:8)

1. Pochvennyy institut im. V.V.Dokuchayeva.
(North America--Soils)

RUDNEVSKIY, Maksim Ivanovich; DUKOV, V.M., redaktor; DZHATIYEV, S.G., tekhnicheskiy redaktor

[Elements of the history of electric engineering for the secondary school course in physics; a teacher's manual] Elementy istorii elektrotekhniki v kurse fiziki srednei shkoly; posobie dlia uchitelia. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1956. 126 p. (MLRA 9:8)
(Electric engineering--History)

L 25785-65 EWT(l)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b) LJP(c) GG/JD

ACCESSION NR: AR4040348 S/0081/64/000/006/G021/G021

SOURCE: Ref. zh. Khimiya, Abs. 6G119

AUTHOR: Malkova, O. P.; Zhukova, A. N.; Rudnevskiy, N. K.

TITLE: A spectrochemical method for the determination of boron in germanium and germanium films

CITED SOURCE: Tr. po khimii i khim. tekhnol. (Gor'kiy), vyp. 1, 1963, 188

TOPIC TAGS: boron determination, boron spectrum, spectroscopy, germanium analysis, germanium film

TRANSLATION: A 10 mg sample, with or without a sublayer, was heated at 70C in the presence of 4 mg mannitol and 3 ml of a 1:6 mixture of HNO_3 and HCl; after the sample was dissolved, the solution was treated with 1 ml HCl and 15 mg of boron-free powdered charcoal, and the $GeCl_4$ was distilled off at 75C. After addition of NaCl, the dry residue was volatilized from the channel of a carbon electrode and the spectrum was excited in a direct current arc at 10 amperes. Standards were prepared from mixtures of charcoal, borax, mannitol and NaCl, and calibration curves were drawn in S, log C coordinates. The absolute

Card 1/2

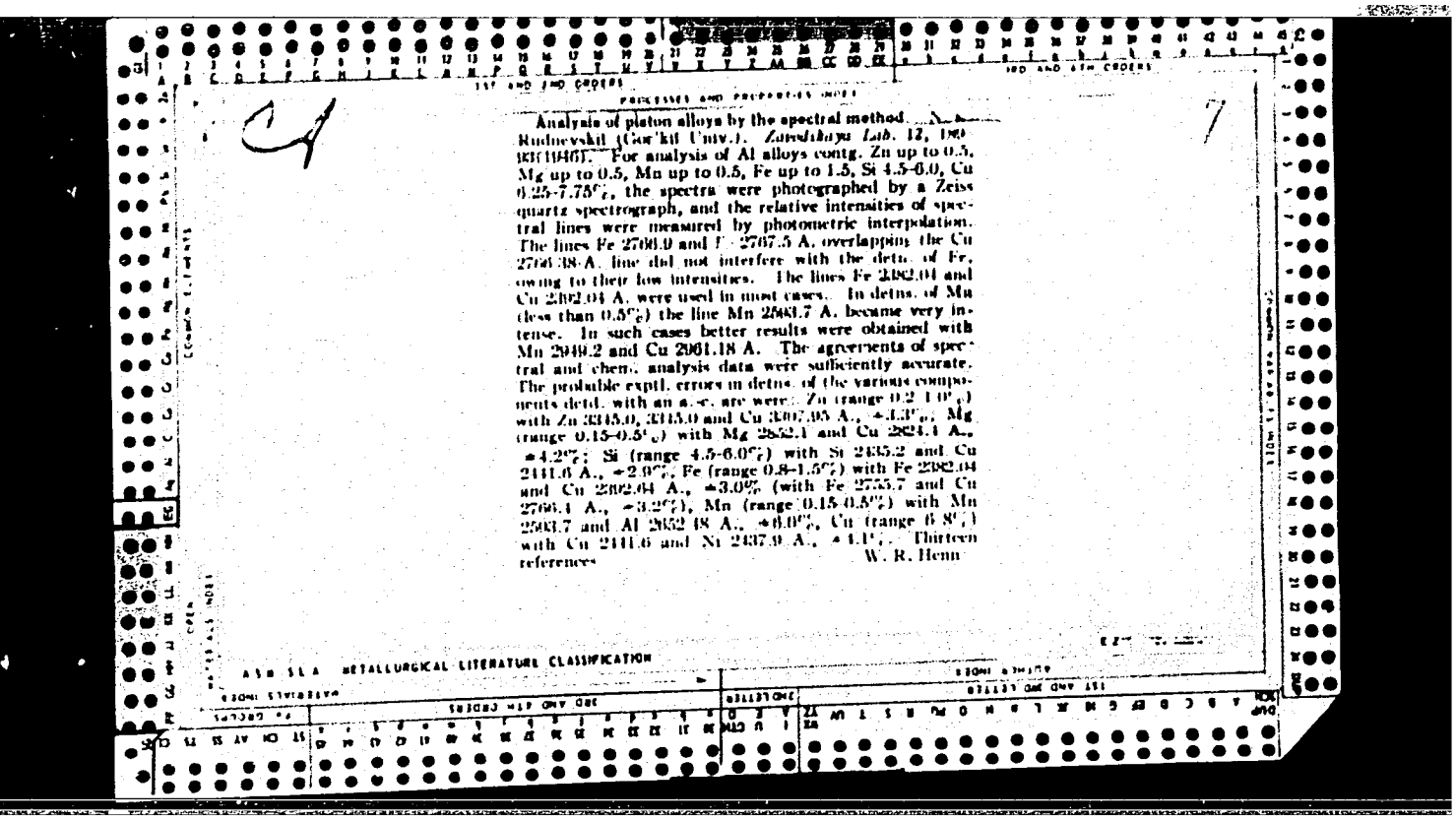
L 25785-65

ACCESSION NR: AR4040348 0

sensitivity of the analysis was 4×10^{-8}g and the mean error was 20%.
G. Kibisov

SUB CODE: SS, OP ENCL: 00

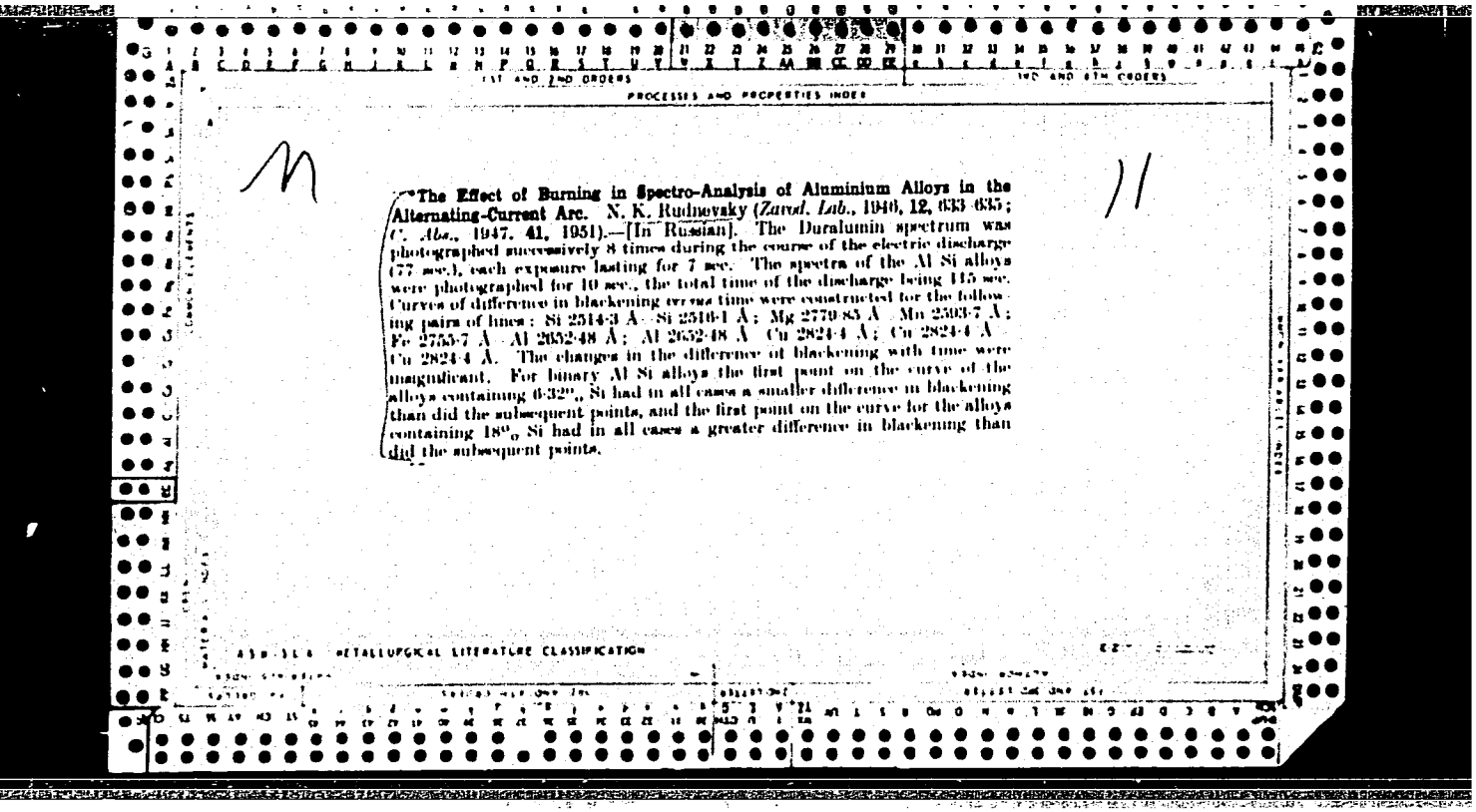
Card 2/2



Analysis of piston alloys by the spectral method. ...A... Rudnevskii (Gor'kii Univ.). *Zavodskaya Lab.* 12, 180 (1946). For analysis of Al alloys contg. Zn up to 0.5, Mg up to 0.5, Mn up to 0.5, Fe up to 1.5, Si 4.5–6.0, Cu 0.25–7.75%, the spectra were photographed by a Zeiss quartz spectrograph, and the relative intensities of spectral lines were measured by photometric interpolation. The lines Fe 2760.9 and [illegible] 2767.5 A. overlapping the Cu 2766.38-A. line did not interfere with the detn. of Fe, owing to their low intensities. The lines Fe 2382.04 and Cu 2382.04 A. were used in most cases. In detns. of Mn (less than 0.5%) the line Mn 2881.7 A. became very intense. In such cases better results were obtained with Mn 2949.2 and Cu 2961.18 A. The agreements of spectral and chem. analysis data were sufficiently accurate. The probable exptl. errors in detns. of the various components detd. with an a.-c. arc were: Zn (range 0.2–1.0%) with Zn 3345.0, 3345.0 and Cu 3307.95 A., ±4.3%; Mg (range 0.15–0.5%) with Mg 2852.1 and Cu 2824.4 A., ±4.2%; Si (range 4.5–6.0%) with Si 2435.2 and Cu 2441.6 A., ±2.9%; Fe (range 0.8–1.5%) with Fe 2382.04 and Cu 2382.04 A., ±3.0% (with Fe 2755.7 and Cu 2766.4 A., ±3.2%); Mn (range 0.15–0.5%) with Mn 2593.7 and Al 2652.48 A., ±6.0%; Cu (range 0.8%) with Cu 2441.6 and Ni 2437.9 A., ±4.1%. Thirteen references.

W. R. Henn

A58 SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

The Effect of Burning in Spectro-Analysis of Aluminium Alloys in the Alternating-Current Arc. N. K. Rudnevsky (*Zavod. Lab.*, 1946, **12**, 633–635; *C. Abs.*, 1947, **41**, 1951).—[In Russian]. The Duralumin spectrum was photographed successively 8 times during the course of the electric discharge (77 sec.), each exposure lasting for 7 sec. The spectra of the Al Si alloys were photographed for 10 sec., the total time of the discharge being 115 sec. Curves of difference in blackening versus time were constructed for the following pairs of lines: Si 2514·3 Å—Si 2516·1 Å; Mg 2779·85 Å—Mn 2593·7 Å; Fe 2755·7 Å—Al 2652·48 Å; Al 2652·48 Å—Cu 2824·4 Å; Cu 2824·4 Å—Cu 2824·4 Å. The changes in the difference of blackening with time were insignificant. For binary Al Si alloys the first point on the curve of the alloys containing 0·32% Si had in all cases a smaller difference in blackening than did the subsequent points, and the first point on the curve for the alloys containing 18% Si had in all cases a greater difference in blackening than did the subsequent points.

ASD SLA METALLURGICAL LITERATURE CLASSIFICATION

Change of the temperature of the arc through change of the thermal treatment of the electrodes. N. K. Rudnevskil and K. A. Zueva. *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 12, 416-21(1948).—In an a.c. arc the abs. intensities of the lines Al 2652, Al 2660, and Si 2516 A., emitted by Al-Si alloys of 1.41 10.21% Si, were found to be regularly higher for the quenched than for the annealed alloys. Conversely, the intensity of Al 2816 was mostly lower in the quenched alloys. The intensity differences Al 2652 − Al 2816 are consistently higher for the quenched alloys, but the difference Al 2660 − Al 2652 is the same for quenched and for annealed samples. The intensity difference Si 2516 − Al 2652 A. is very slightly greater for the annealed alloys; the difference Si 2516 − Cu 2824 is somewhat greater for the quenched specimens. These differences of intensities are greatest in the neighborhood of the electrode, smaller in the middle of the gap. They are evidently due to a change of the temp., depending on the thermal treatment of the alloy electrode. By Mandel'shtam's relation, the variation of the relative intensity I of lines with the temp. T is $\Delta I/I = \Delta T(E_1 - E_2)/kT^2$, where E = the excitation energies of the upper levels of the 2 lines, consequently, for a given ΔT the variation ΔI is the smaller the higher T. In agreement with this prediction, the effect of the thermal treatment on the relative intensities of 2 stated lines was found to decrease with increasing current intensity in the arc, i.e. with increasing temp. In a spark, thermal treatment of the electrode alloy has no effect on the line intensities.

N. Thon

CA

7

The influence of silicon on the intensity of aluminum lines in the analysis of an aluminum silicon alloy in an alternating-current arc. N. K. Rudneyskii (Gorki State Univ.). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 14, 642–7(1950).—In an a.-c. arc the abs. intensity of the arc lines Al I, 2660.39, 2652.49, and 2567.99 A. increases with increasing Si concn. in a binary AlSi alloy, although the Al concn. decreases. The change in intensity of non-homologous Al line pairs with increasing Si concn. indicates a change in the arc temp. Si lowers the temp.; expts. show that the amt. of volatilized alloy increases with increasing Si concn. In a condensed spark discharge, which has a higher arc temp., there is no change in line intensity with increasing Si content.

S. Pakswer

1951

CA

7

Spectral determination of calcium in aluminum-ammonium alums. N. K. Rudnevskii, P. N. Ivagina, and P. N. Ivagin (Gorki Univ.). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 14, 698–700(1950).—The method for detg. Mg in alums (preceding abstr.) is used for detg. Ca in alums in a 10% alum soln. Concns. of 8×10^{-4}% Ca could be detd. with the line pair Ca II 3933.67-Al 3057.15 A. A method of graphic approximation is indicated for the construction of working curves.

S. Pakswer

1951

KUDNEVSKIY, N.K.

*Effect of Thermal Treatment of the Binary Aluminium-Silicon Alloy on the Intensity of Spark Lines. N. K. Rudnevsky and A. Ya. Porkhunova (*Uchenye Zapiski Gor'kov. Univ.*, 1953, (24), 3–6; *C. Abs.*, 1956, 49, 9470).—[In Russian]. The effect of hardening and of annealing Al–Si alloys contg. 0·518% Si on the relative intensity of Si lines in spark spectra was studied. Thermal treatment of the alloy affects the intensity of lines chiefly at the beginning of spark excitation. The relative intensity of lines is greater in hardened than in annealed specimens. The intensity graph of Si lines in a spark has a break in the region of eutectic Si concentrations. The slope of the lines is greater for eutectic than for hypo-eutectic concentrations. This difference is strongest at the beginning of sparking and disappears after annealing.

RUDNEVSKIY, N. K.

E. T. R.
June 1954
Fuels and Combustion

8116* Investigation of Combustion Conditions of Gas Mixtures. XXIV. Cold-Flame Oxidation of Propane. M. I. Gerber and M. B. Neiman. XXV. Cold-Flame Oxidation of Butene. (Russian.) A. A. Dobrinskaia, M. B. Neiman, and N. K. Rudnevskii. *Zhurnal Fizicheskoi Khimii*, v. 27, no. 11, Nov. 1953, p. 1617-1630.
Includes tables, graphs, 38 ref.

3-30-54

RUDNEVSKIY, N. K.

USSR/Chemistry - Combustion Kinetics Nov 53

"Investigation of Conditions of Ignition of Gas Mixtures, XXV. Investigation of the Cold-Flame Oxidation of Butene(I)," A. A. Dobrinskiy, M. B. Neyman, N. K. Rudnevskiy, Inst Chem Phys, Acad Sci USSR

Zhur Fiz Khim, Vol 27, No 11, pp 1622-1630

Investigated the kinetics of cold-flame oxidation of I. Detd the extent of the cold flame in this oxidation. Derived the math relationship acc to which the period of induction of the cold flame of I is reduced with increased temp and pressure, and showed that during the period of induction, accumulation of peroxides, satd higher aldehydes, and croton aldehyde (II) takes place acc to an exponential law. Proved that in the slow oxidation of I, O_2 is added not only at the double bond (with formation of CH_3CHO), but also at the terminal carbon(with formation of II).

274T18

RUDNEVSKIY, N. K.

USSR Chemistry - Combustion Kinetics

"Investigation of the Conditions of Ignition of Gas Mixtures. Comm 26. The Effect of Methylamine (I) on the Cold-Flame Oxidation of Butane (II) and Butene-2 (III)," M. B. Neyman, A. A. Dobrinskaya, N. K. Rudnevskiy, Inst Chem Physics, Acad Sci USSR

Zhur Fiz Khim, Vol 27, No 12, pp 1784-91, 1953

Investigated the effect of I on the cold-flame oxidation of II and III. Derived the mathematical relationship according to which the period of induction of the cold-flame oxidation of II and III is increased by addition of I. Found that admixt of I reduces the rate of accumulation of peroxides during induction and brings about formation of consideable quantities of CH_2O.

275T11

USSR/Physics - Metallurgy

Card 1/1 Pub. 43 - 23/97

Authors : Rudnevskiy, N. K., and Muhkin, G. A.

Title : Certain characteristics of the entry of Al and Si into an arc discharge during the change in composition of the binary Al-Si alloy

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, 258-259, Mar-Apr 1954

Abstract : A study of the dimensions and forms of an arc discharge spot showed that an increase in the Si content in the investigated interval of concentrations is followed by an increase in the spot area and in the depth of individual craters. This served as an indication that the entry of the substance of the alloy into the arc increases with the increase of Si concentration. This in turn was confirmed by the amount of aluminum and silicon oxides formed on the constant electrodes. The relation between the Al content of the alloy and the number of its atoms in the Arc is discussed. One USSR reference (1950).

Institution : State University, Scientific Research Institute of Chemistry, Gorkiy

Submitted : .....

USSR/Chemistry - Spectral analysis

Card 1/1 Pub. 43 - 82/97

Authors : Malkova, O. P., and Rudnevskiy, N. K.

Title : Spectral analysis of powders for their Si and Pb content during the manufacture of synthetic corundum

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, page 293, Mar-Apr 1954

Abstract : A method was developed for the analysis of powders used in the manufacture of synthetic corundum. The probable accuracy of the method was established at ± 10%.

Institution : State University, Scientific Research Institute of Chemistry, Gorkiy

Submitted : .....

RUDNEVSKIY, N. K.

3277. The dependence of copper and nickel line-intensity upon their concentration in copper-nickel alloys. N. K. Rudnevskii and G. I. Golitsyn. *Izv. Akad. Nauk SSSR, Ser. Fiz.* 1955, 19 (1), 123-125. *Ref. Zhur., Khim.*, 1956, Abstr. No. 7122.

Curves with coordinates log *I* and log *C* for lines [illegible] and Ni are given within limits of Ni concn. of [illegible]. The value of *I* of Cu I lines has [illegible] when there is 80 to 85 per cent of Cu [illegible] of Cu II increases throughout [illegible] range. The value of *I* for lines [illegible] R. Lomm

RUDNEVSKIY,N.K.; MATYUNIN,A.I.; OBUKHOVA,Ye.S.

Investigation of copper-nickel alloy components entering into the gas cloud surrounding the arc. Izv. AN SSSR. Ser. fiz. 19 no.1: 125-126 Ja-F '55. (MLRA 8:9)

1. Naucnno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete.
(Spectrum analysis) (Spectrometer)

MUKHIN,G.A.; RUDNEVSKIY,N.K.

Effect of various kinds of heat treatment of binary aluminum-silicon alloy components on the arc discharge reception. Izv. AN SSSR. Ser. fiz. 19 no.1:126-127 Ja-F '55. (MIRA 8:9)

1. Zavod imeni M.I.Kalinina i Nauchno-issledovatel'skiy Institut khimii pri Gor'kovskom gosudarstvennom universitete
(Spectrum analysis) (Spectrometer)

MALKOVA, O.P.; RUDNEVSKIY, N.K.

Spectrum analysis of silicon and lead in powdered materials used in synthetic corundum manufacture. Izv.AN SSSR.Ser.fiz. 19 no.2:224 Mr-Ap '55. (MLRA 9:1)

1.Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete.
(Tartu--Spectrum analysis--Congresses)

24(7) PHASE I BOOK EXPLOITATION SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956.
t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) (Trudy Izd-va L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.I. Sobelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.O. Kortskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Milyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; M.I. Sidorov; Tech. Ed.: T.V. Sarnyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.) SOV/1700

Rakulov, N.A. Investigation of the Relation of the Composition of the Sample to the Emission Cloud Composition in Spectrum Analysis 276

Reytbaum, Ya.D., Ye.S. Kostyukova, A.I. Chernenko, and V.D. Malykh. Measuring the Vaporization Rate of Elements and Their Compounds in an Electric Arc 285

Kolotukhin, G.Ye. Investigation of the Effect of Electrode Cooling Conditions on Spectral Line Intensity 289

Rudnevskiy, N.K., and Ye.S. Obukhova. Special Characteristics of the Entry of Binary Alloys Into the Gas Cloud of an A-C Arc 292

Rudnevskiy, N.K., and A.I. Dyakhlov. Special Characteristics of the Entry of a Copper-Zinc Alloy Into a Spark 296

Rudnevskiy, N.K., and Yu.S. Kalinin. Experimental Study of the Temperature Dependence on Component Concentration in Some Binary Alloys 298

Rudnevskiy, N. K.

USSR/Analytical Chemistry / Analysis of Inorganic Substances C-2

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 8511

Author : Malkova, O. P. and Rudnevskiy, N. K.
Inst : Not given
Title : The Spectroscopic Determination of Silicon and Lead in Powders Used in the Production of Synthetic Corundum

Orig Pub : Zh. analit. khimii, 1956, Vol 11, No 2, 135-138

Abstract : Specially constructed upper and lower carbon electrodes have been used in the spectroscopic determination of Si and Pb (≤0.05%). During the recording of the spectra, the lower electrode with the sample is displaced relative to the upper electrode by a motor. The flame of the arc is directed along the edge of the powder layer closest to the slit of the instrument. The interelectrode distance is 2.5 mm, the rate of displacement of the lower electrode is 0.16 cm/sec, and the source used is an alternating current arc with a current strength of 6 amps. The spectra are photographed with a type ISP-22 spectrograph; 40 sec exposures and two-stage clarification are used. The lines in the spectra are matched with a type MF-2 microphotometer. The determination of Si

Card 1/2 -36-

RUDNEVSKIY, N. A.

500
10M

Spectroscopic determination of silicon and lead in powders used for the production of synthetic corundum. O. P. Malkova and N. K. Rudnevskii. *J. Anal. Chem. U.S.S.R.* 11 139–42(1956)(Engl. translation).—See *C.A.* 50, 14442a.
B. M. R.

RUDNEVSKIY, N K

6

Silicon determination in ammonium alum by spectrum analysis. O. P. Malkova and N. K. Rudnevskii (State Univ., Gorkii). *Zavodskaya Lab.* 22, 199–200(1956).—The purity of ammonium-Al sulfate used in the production of corundum is crit. A method is described for detg the concn of Si in the 10^{-4}–10^{-2}% range. The standards were prepd. by the addn. of Na silicate to Na-Al alum.
W. M. Sternberg

SOV/137-59-3-7308

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 336 (USSR)

AUTHORS: Rudnevskiy, N. K., Kalinin, Yu. S.

TITLE: Some Spectroscopic Investigations of Copper-manganese and Copper-zinc Binary Alloys in an Alternating-current Arc (Nekotoryye spektroskopicheskiye issledovaniya dvoynykh splavov med'-marganets i med'-tsink v duge peremennogo toka)

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 11-16

ABSTRACT: Cu-Mn alloys containing 1-32% Mn and Cu-Zn alloys containing 5-9% Zn were studied in an alternating-current arc (DG-1), at an I=4 a without preliminary roasting. Both electrodes are made of the alloy investigated. The intensity of the spark lines continuously increases throughout the entire range investigated and the dependence of $\log_{10} I$ on $\log_{10} c$ for Mn lines is non-linear. In the 1.2-10% Mn range the tangent of the angle of slope of the K curve for the Mn arc line I 3054.36 is 1.9, while for spark lines it is smaller. These phenomena are explained by an increased intake of the alloy substance into the gas cloud with the increase in the concentration of Mn from 1.2 to 10%. As a result, an appreciable increase in the absolute intensity should be

Card 1/2

Some Spectroscopic Investigations of Copper-manganese and Copper-zinc (cont.)

observed for Mn lines that are not subject to noticeable reabsorption with a subsequent increase in the coefficient K. In spark lines K is greater than in arc lines because the temperature of the gas cloud decreases with the simultaneous increase in the concentration of Mn and of the intake of the substance into the gas cloud. This results in a decrease in the intensity of spark lines which are the more sensitive to changes in temperature. The behavior of the spark and arc lines of Cu in the 90-100% Cu range can be explained in the same way. In Cu-Zn alloys the curve of $\log_{10} I$ as a function of $\log_{10} c$ for Zn spark line II 2502 passes through its maximum in the vicinity of 50% Zn. Measurements showed that with an increase of Zn in the alloy from 50 to 95% the temperature of the arc decreases from 5600 to 5300°K, which phenomenon correlates with the increase in the amount of alloy material passing into the gas cloud.

M. N.

Card 2/2

SOV/137-59-3-7309

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 336 (USSR)

AUTHORS: Rudnevskiy, N. K., Dryakhlov, A. I.

TITLE: Investigation of the Passing of the Copper-nickel Binary Alloy Material into the Spark (Issledovaniye postupleniya veshchestva dvoynogo splava med'-nikel' v iskre)

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 17-20

ABSTRACT: The authors investigated Cu-Ni alloys (A) in the 7.8-79% Ni concentration range. The conditions for the excitation of the spectrum were as follows: IG-2, I=1.4 a, c=0.01 μf, L=0, discharger gap 3 mm, analytical gap 1 mm. The A material entering the spark settles on the walls of a small glass vessel which consists of two small glass beakers inserted one into the other. The electrodes were sparked 20 times for 4 min per exposure. The electrodes were sharpened anew each time. Then, all the A material that had settled on the walls of the vessel and on the glass tubes covering the electrodes was removed. The oxides settled on the tips of the electrodes were also removed. The amount of Cu and Zn collected in this manner was determined by the electrolytic method. It was established that

Card 1/2

Investigation of the Passing of the Copper-nickel Binary Alloy Material (cont.)

under the working conditions selected a uniform passing of the A material into the gas cloud is attained. The over-all amount of Cu and Ni passing into the spark changes very little with the increase in the concentration of Ni in the alloy.

M. N.

Card 2/2

SOV/137-59-3-7316

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 337 (USSR)

AUTHORS: Rudnevskiy, N.K., Obukhova, Ye.S.

TITLE: On the Dependence of the Concentration of Nickel in the Gas Cloud of an A-C Arc on the Concentration of Nickel in a Copper-nickel Alloy (O zavisimosti kontsentratsii nikelya v gazovom oblake dugi peremennogo toka ot kontsentratsii nikelya v mednonikelevom splave)

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 97-98

ABSTRACT: The mean concentration of Ni in the arc gas cloud was evaluated by collecting the Cu-Ni-alloy material passing into the arc into a small glass vessel. A PS-39 generator with a 5-amp current intensity was used. Alloys containing 0 - 79% Ni were investigated. The amount of Cu and Ni was first determined by the electrolytic method in the fused thin surface layer of the electrodes (E) which is readily separated from the E after roasting for 85 min. It was established that the concentration of Ni is higher in the surface layer of the E than in the alloy. The phenomenon of the enrichment with Cu of the gas cloud of the arc must be attributed to the greater volatility of Cu as compared to that of Ni.

M.N.

Card 1/1

USCOMM-DC-61,025

67220
SOV/58-59-7-16710

18.8100

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 293 (USSR)

AUTHORS: Rudnevskiy, N.K., Kalinin, Yu.S.

TITLE: On the Influence of Certain Factors on the Character of the Dependence of the Line Intensity of Iron on Its Concentration in Cu-Mn Alloys in an AC Arc

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 2, pp 311 - 314

ABSTRACT: It was established that a change in the concentration of manganese in Cn-Mn alloys has a substantial effect on the character of the dependence of the absolute line intensity of iron on its concentration in the alloy. The authors explain this by the conclusion that a change in the composition of the alloy leads to a different rate of entry of the alloy substance into the gas cloud of the arc, as well as to a change in the latter's temperature. On the example of the 2739.55 Å spark line of Fe II it was experimentally shown that the dependence of line intensity on the concentration of Fe ions in the arc cloud, provided that allowance is made for the change in the discharge temperature, is expressed in logarithmic coordinates by a straight line with a slope equal to unity.

Card 1/2

67220

SOV/58-59-7-16710

On the Influence of Certain Factors on the Character of the Dependence of the Line Intensity of Iron on Its Concentration in Cu-Mn Alloys in an AC Arc

As the source of light, the authors used an AC arc, obtained from a "DG-1" generator at a current intensity of 4a and an arc gap of 2 mm, without preliminary roasting. The relative values of the concentration of Fe ions in the cloud and its temperature were determined from Fe spark lines by the spectral method.

V. Slavnyy

Card 2/2

SOV/58-59-7-16714

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 294 (USSR)

AUTHORS: Golitsyn, G.I., Rudnevskiy, N.K.

TITLE: Some Spectroscopic Studies of Double Aluminum-Silicon Alloys in a Spark and in an Arc Operating Under Sparking Conditions

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 2, pp 315 - 318

ABSTRACT: The authors studied the manner in which the absolute and relative intensities of the arc and spark spectral lines of Al and Si depend on the content of these elements in double alloys. As the source of spectral excitation, they used a high-voltage spark and a low-voltage arc burning under sparking conditions. They used aluminum and carbon exchangeable electrodes. It is shown that the form of the investigated dependence differs for the lines of Al and Si, and that it is determined by the conditions of excitation and the nature of the lines used (arc or spark). The bibliography contains 2 titles.

A.B. Shayevich

Card 1/1

67221

18.8100
18.1210

30V/58-59-7-16711

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, pp 293 - 294 (USSR)

AUTHORS: Rudnevskiy, N.K., Mukhin, G.A.

TITLE: Study of the Entry Into Discharge of Al-Si Alloy Substance in an AC Arc

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 2, pp 319 - 322

ABSTRACT: The authors studied the entry into discharge of the substance of a double Al-Si alloy with a concentration of Si ranging from 0.55 to 18.2%. They used an AC arc fed by a "DG-1" generator at a current intensity of 5a. It was established that on increasing the content of Si in the alloy, the area of the arc spot and the depth of damage grow; moreover, this growth is greater in the case of a carbon counterelectrode than in the case of a copper one. This points to a more intensive entry into discharge of the alloy substance in the case of high concentrations of Si. This regularity is confirmed by experiments dealing with the transfer of the alloy substance to the carbon counterelectrode. Oxides that had been transferred to the counterelectrode were placed in a crucible and calcinated at a temperature of 1,100 C, after which they were weighed. It turns out that there exists a linear dependence between the weight of the oxides and the roasting time,

Card 1/2

Study of the Entry Into Discharge of Al-Si Alloy Substance in an AC Arc

and the slope of the curves increases with an increase in the concentration of Si in the alloy. The authors also studied the dependence of transfer on the magnitude of the arc gap. On increasing the gap, the quantity of transferred oxides decreased. In order to determine the absolute contents of Al in the oxides, the latter were solubilized and analyzed by the spectral method. The investigations showed that the quantity of Al entering into discharge increases with a decrease in the content of Al in the alloy. The increase in the absolute intensity of the arc lines of Al on reducing its concentration in the alloy is explained in terms of the characteristic features of entry established through these experiments. The authors explain the fall-off in the intensity of the 2816.8 Å spark line of Al II that is observed in this connection, by a change in the conditions of exciting the spectrum.

V. Slavnyy

Card 2/2

18.8100
18.1290

#7219

SOV/58-59-7-16709

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 293 (USSR)

AUTHORS: Rudnevskiy, N.K., Malkova, O.P.

TITLE: On the Entry Into Discharge of Cd-Zn Alloy Substance in an AC Arc

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 2, pp 326 - 329

ABSTRACT: It was established earlier that the rate of entry into discharge of the substance of Cu-Ni, Cu-Mn, and Cu-Zn alloys in an AC arc depends essentially on the composition of the alloys. In the present study the authors examine the characteristic features of entry of Cd-Zn alloy substance and the dependence of the absolute and relative line intensity of Cd and Zn on the concentration of these elements in the alloy. The alloys were cast from pure Cd and Zn metals. The Cd concentration was determined by means of the polarographic method. The authors used an AC arc, obtained from a "DG-1" generator, at a current intensity of 2 a and an arc gap of 2 mm, without preliminary roasting. In order to study the entry of the alloy substance into discharge, the entry products were collected in a vessel in which the electrodes were placed; then their Cd and Zn content was determined by the polarographic method. It was established that, as distinguished from the case of Cu-Ni, Cu-Mn, and Cu-Zn alloys, the quantity of Cd-Zn alloy substance

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On the Entry Into Discharge of Cd-Zn Alloy Substance in an AC Arc

entering into discharge does not change essentially on varying the composition of the alloy. The authors connect this with the fact that the heat conduction and boiling point of the Cd-Zn alloy depend considerably less on its composition than in the case of the other mentioned alloys. The Cd concentration in the entry products practically coincides with its concentration in the alloy. The dependence of the absolute and relative intensity of various lines of Cd and Zn on their concentrations in the alloy is expressed in logarithmic coordinates by a straight line with a slope approaching unity. (At high concentrations a lessening of the slope was observed for some lines as a result of reabsorption).

V. Slavnyy

Card 2/2

SOV/58-59-8-19174

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 303 (USSR)

AUTHORS: Rudnevskiy, N.K., Obukhova, Ye.S.

TITLE: Some Methods of Determining the Amount of Alloy Material Entering Into the Interelectrode Gap of an Alternating-Current Arc

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 2, pp 330-333

ABSTRACT: The authors assume that there exists a proportionality between the total amount of material that has vaporized from the electrodes (VM) and the amount of material that has entered into the arc cloud. This assumption permits the utilization of VM measurements in solving a number of problems in the domain of the spectral analysis of alloys. In order to estimate the VM, it is suggested that one determine the amount and composition of the deposit on the walls of the closed vessel in which the arc burns, or in the layer of wadding through which the air containing the aerosols of the arc burning products is sucked off. It is demonstrated that the weight of the reguli that are formed during arc burning amounts to only 1 to 10% of the total weight loss of the electrode material. Instruments for collecting the arc burning products are described. The bibliography contains 11 titles.

A.B. Shayevich

Card 1/1

L 24888-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5004434 S/0075/65/020/001/0130/0132

AUTHOR: Malkova, O. P.; Tumanova, A. N.; Rudnevskiy, N. K.

TITLE: Spectrographic determination of boron in germanium and germanium films

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 1, 1965, 130-132

TOPIC TAGS: carbon powder, germanium tetrachloride, germanium distillation, mennitol, d c arc, tetraboron

ABSTRACT: A method has been developed for the determination of boron in germanium and germanium films from a 10-mg sample. Boron is extracted from germanium into boron-free carbon powder. Simultaneously germanium is distilled as tetrachloride in the presence of mannitol. The spectrographic analysis is carried out using a d-c arc and synthetic standards, which are prepared by adding boron (as tetraboron) to a mixture of boron-free carbon powder with 20% of mannitol and 5% of sodium chloride. The absolute sensitivity of the method is 4×10^{-8} g, the accuracy is ±20%. Orig. art. has: 1 figure.

Card 1/2

L 24888-65

ACCESSION NR: AP5004434

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N. I. Lobachevskogo (Scientific-Research Institute of Chemistry at the Gorky State University)

SUBMITTED: 27Feb64 ENCL: 00 SUB CODE: IC, OP

NO REF SOV: 003 OTHER: 000

Card 2/2

[redacted], ZHDANOVA, A.N.; RUDNEVSKIY, N.K.

Chemical-spectral method for determining indium, gallium, bismuth, antimony, arsenic in germanium films. Zhur. anal. khim. 19 no.3:312-315 '64. (MIRA 17:9)

RUDNEVSKIY, N.K.; OBUKHOVA, Ye.S.

Features of the entry of the substance of some binary alloys into the gas cloud of an a.c. arc. Fiz.sbor. no.4:292-295 '58. (MIRA 12:5)

1. Nauchno-issledovatel'skiy institut khimii Gor'kovskogo gosudarstvennogo universiteta imeni N.I.Lobachevskogo.
(Electric arc) (Alloys--Spectra)

RUDNEVSKIY, N.K.; KALININ, Yu.S.

Experimental investigation of the temperature dependence of an a.c. arc on the concentration of components in some binary alloys. Fiz.sbor. no.4:298-303 '58. (MIRA 12:5)

1. Nauchno-issledovatel'skiy institut khimii Gor'kovskogo gosudarstvennogo universiteta imeni N.I.Lobachevskogo.
(Electric arc)

SU- 4 -3-3/30

AUTHOR: Radnevskiy, N.K.

TITLE: On the Possibility of Control of Non-Uniformity of Entry of Alloys into the Gaseous Cloud of an Arc by Using the Spectrum of the Basic Alloy Component. (O vozmozhnosti kontrolya neravnomernosti v postuplenii veshchestva splavov v gazovoye oblako dugi po spektru osnovnogo komponenta splava.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.3, pp.296-300 (USSR).

ABSTRACT: A considerable non-uniformity in entry of simple alloys into the gaseous cloud of an arc when the composition of such alloys was altered, was reported earlier (Refs.1-3) and it was found that such non-uniformity is accompanied by a change of temperature of entry into the gaseous arc cloud (Ref.4-6). The present paper aims to show that from the change of the relative intensity of the 3093.99 and 2492.15 Å pair of lines of CuI with the change of concentration of copper in Cu-Ni, Cu-Mn and Cu-Zn, one can find the nature of entry of copper into the gaseous arc cloud and study the non-uniformity of entry of components of these

Card 1/3

On the Possibility of Control of Non-Uniformity of Entry of Alloys into the Gaseous Cloud of an Arc by Using the Spectrum of the Basic Alloy Component

three alloys into the arc cloud. Cu-Ni alloys with from 1 to 80% of Ni, Cu-Mn with from 1 to 32% of Mn and Cu-Zn with from 5 to 100% of Zn were studied. The amount of copper and the total amount of the alloy entering the arc cloud were measured by weighing. Spectra were recorded on a spectrograph ISP-22. The results obtained are shown in Figs.1-3. The three curves in each of the figures (Figs.1-3) give the amount of the alloy (in mg or gram-atoms) entering the arc, the amount of copper (P) entering the arc, and the relative intensity (R) of the 3093-2492 Å pair, all as functions of copper content in %. Fig.4 gives the dependence of the relative intensity of the 3093-2492 Å CuI pair (log R) on the amount of copper entering the gaseous arc cloud (log P). Curves I, II, III in Fig.4 represent Cu-Ni, Cu-Zn and Cu-Mn alloys, respectively. Fig.4 shows that for all the three alloys dependence of log R on log P is linear within the experimental error. Consequently one can

51-4 -3-3/30

On the Possibility of Control of Non-Uniformity of Entry of Alloys into the Gaseous Cloud of an Arc by Using the Spectrum of the Basic Alloy Component.

make deductions on the nature of entry of copper into the gaseous arc cloud, when the amount of copper is altered in an alloy, from the relative intensity of the selected pair of CuI lines. There are 4 figures and 10 references of which 7 are Soviet, 1 American and one other.

ASSOCIATION: Gor'kiy State University. (Gor'kovskiy gosudarstvennyy universitet.)

SUBMITTED: March 30, 1957.

1. Alloys---Vaporization---Control 2. Alloys---Spectrographic analysis

Card 3/3

31547

SOV/137-58-5-11661

188400

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, pp 311-312 (USSR)

AUTHORS: Rudnevskiy, N.K., Kozlova, N.V., Kazarina, T.P.

TITLE: Using a Spark and an Arc for Investigations Into the Dependence of the Intensity of Magnesium and Aluminum Lines on Their Concentration in a Binary Magnesium - Aluminum Alloy

PERIODICAL: Uch. zap. Gor'kovsk. un-ta, 1958, Nr 32, pp 161 - 167

ABSTRACT: The authors investigated the dependence of the absolute and the relative intensity of Mg and Al lines on their concentration in an Mg-Al alloy. A spark collected by the Rayskiy circuit and an a-c arc of the Sventitskiy circuit were used as sources for the spectrum excitation. Mg-Al alloys contained 2.3 - 9.8% Al. The specimens were bar-shaped having 1.5 x 4.5 x x 3 cm dimension. The photographic records of the spectrum were made with an ISP-22 spectrograph. When analyzing Mg-Al alloys in the a-c arc, compared to the spark, changes in the current of its composition cause greater changes in the absolute intensity

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SOV/137-59-5-11661

Using a Spark and an Arc for Investigations Into the Dependence of the Intensity of Magnesium and Aluminum Lines on Their Concentration in a Binary Magnesium - Aluminum Alloy

of the alloy base lines, while the absolute intensity of Mg arc and spark lines remains practically unchanged in the spark of the investigated Mg concentration range, the changes in the arc are substantial. The character of changes in the intensity of Mg arc and spark lines is different. This may be explained by changes in the arc discharge temperature. It is shown that in the a-c arc the dependence of absolute and relative intensity of the Al I 3082.16 Å arc line on the Al concentration in the alloy (2 - 10%) is not described by Lomakin's formula, but by the exponential formula $J = Ae^{kc}$, where A and k are constant values, and c is the Al concentration in the alloy.

A.Sh.

Card 2/2

67165

5.3100
24.3410

SOV/51-7-6-36/38

AUTHORS: Zharkov, V.V. and Rudnevskiy, N.K.

TITLE: The Internal Molecular Hydrogen Bond in Isopropylbenzene Hydroperoxide

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, No 6, pp 848-850 (USSR)

ABSTRACT: The authors investigated the internal hydrogen bond between the hydroxyl group and the π-electrons of the aromatic ring in isopropylbenzene hydroperoxide (cumene hydroperoxide). The infrared spectra were recorded with an IKS-2 spectrometer and an LiF prism. The spectral slit width was 13 cm^{-1} and the scanning rate - 18 cm^{-1}/min. Cumene hydroperoxide of 99-100% purity was supplied by B.A. Redoshkin. It was dissolved in CCl_4 (concentration of the solution was 0.0035 mole/litre). A thermostat in which temperature was kept constant to ± 0.2°C was used to obtain the infrared spectra at several temperatures. The absorption band corresponding to the fundamental vibration of the hydroxyl group was obtained in the form of an overlapping doublet with the two components of about the same intensity and width. The frequencies of the components were 3497 and 3530 cm^{-1} (Fig 1). The ratio of the component intensities did not depend on the cumene hydroxide concentration but it did change with temperature. The 3530 cm^{-1}

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SOV/48-23-9-6/57

24(7), 24(3)

AUTHORS: Rudnevskiy, N. K., Golitsyn, G. I., Rybochkin, V. P.

TITLE: The Investigation of the Entry of Siliceous Brass Into an Alternating-current Arc

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 9, pp 1065-1067 (USSR)

ABSTRACT: It is said in the introduction that the strong influence of silicon upon the relative intensity of the spectral lines of zinc and copper in the analysis of siliceous brass is known, and that for the calculation and suppression of this influence various methods have been suggested (Refs 1-6). However, the nature of this influence exercised by silicon upon spectral line intensity has hitherto not been investigated with sufficient thoroughness. In the present paper the entry of zinc and lead into the gas cloud of an arc is investigated. The method of investigation is described in references 8 and 9. A total of 11 siliceous brass alloys is given, on which investigations were carried out. The pointed electrodes had a length of 12 cm and a diameter of 9 mm. The measuring results shown by figure 1 indicate a complicated dependence of the entry of zinc on the concentration of zinc and silicon in the alloys. It further turned out that the concentration of zinc

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SOV/48-23-9-6/57

The Investigation of the Entry of Silicon into Brass Into an Alternating-current Arc

in the gas cloud is higher than in the alloy. The addition of silicon to Cu-Zn-alloys leads to an enrichment of the gas cloud with zinc. In alloys containing 15-20% Zn an irregularity of the entry of substances was discovered, in which connection also the reabsorption on the zinc- and lead lines probably plays a certain part. The logarithm of the degree of reabsorption was found to depend linearly on that of the ratio of the concentration of the zinc- and lead atoms in the gas cloud. It is concluded herefrom that the method developed is useful. There are 3 figures and 9 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gos. universitete im. N. I. Lobachevskogo
(Scientific Research Institute for Chemistry at the Gor'kiy State University imeni N. I. Lobachevskiy)

Card 2/2

SOV/48-23-9-7/57

24(3), 24(7)

AUTHORS: Rudnevskiy, N. K., Obukhova, Ye. S.

TITLE: The Investigation of the Entry of the Substance of Lead Brass Into an Alternating-current Arc

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 9, pp 1067-1069 (USSR)

ABSTRACT: In the analysis of lead brass zinc exercises a considerable influence upon the intensity of the lead lines. It has already previously been shown (Ref 1) that concentration variations of "third" elements lead to irregularities of the entry of substances of the alloys under investigation. The here investigated lead brasses contained 9 - 40% zinc and 0.4 - 2.2% lead. The source used was an arc, the amperage was 4 a, and the spark gap was 1.9 mm. The results obtained showed a dependence of the entry velocity of the substance on the zinc- and lead concentration in the alloys. With a variation of zinc-concentration from 9 to 40% and a lead content of 1.7% the entry velocity increases four-fold. With a variation of lead-concentration from 0.4 to 2.2% and a zinc content of 40%, the entry velocity in the gas cloud increases double its amount. The entry of lead into the gas cloud depends not

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The Investigation of the Entry of the Substance of Lead Brass Into an Alternating-current Arc

only on the lead concentration in the alloy but also on that of the zinc. Further, an increase of the lead content in the alloy leads to a decrease of the zinc concentration in the gas cloud. A variation of the zinc- and lead content in brass thus leads to irregularities of the entry of substance into the gas cloud, which, in turn, leads to a variation of the components in the gas cloud. These results are shown by the diagram in figure 2. In conclusion, the degree of the reabsorption of copper lines depending upon the ratio of the concentration of the lead- and copper-atoms in the gas cloud is investigated and shown by the diagram in figure 3. There are 3 figures and 2 Soviet references.

SOV/48-23-10-22/39

24(7), 5(4)

AUTHORS: Rudnevskiy, N. K., Vyshinskiy, N. N.

TITLE: The Molecular Spectra of Hexaethyl Dilead and the Determination of Its Concentration in Tetraethyl Lead

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 10, pp 1228-1229 (USSR)

ABSTRACT: Industrially produced tetraethyl lead (TEL) which is used as antidetonant, generally also contains hexaethyl dilead (HED) which reduces its quality and chemical stability. The present paper deals with the spectrophotometric determination of HED in TEL. The TEL spectra have already been frequently investigated, whereas nothing is known to the authors about investigations of HED spectra. They therefore investigated the infrared spectra of HED within the range 1.5-25μ by means of an IKS-2-spectrometer and a monochromator of the type EMP-2. However, it turned out that there is hardly any difference between the infrared spectra of HED and TEL within this range, which renders the method useless. By using electron spectra of these compounds (figure 1 - TEL (curve 1) and HED (curve 2) in n-heptane) a method for the quantitative determination of HED in

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The Molecular Spectra of Hexaethyl Dilead and the Determination of Its Concentration in Tetraethyl Lead

TEL could be worked out. Figure 2 shows the calibration curves: Line 1: HED determination in TEL at 320 mμ with a TEL standard; line 2: in n-heptane with n-heptane standard. The relative error in HED determination with a HED concentration of 0.5-3.5% amounted to be ±5%. If TEL contains more than 3-4% HED, optical density is much greater, and therefore dilution is carried out with n-heptane. It is assumed that HED concentration in the sample is a linear function of the true concentration. In the case of such a determination the relative error is about ±4%. The method of determining HED and TEL was used in practice when investigating the photo- and thermo-decay of TEL in the absence of air-oxygen. It was found that, both by uv-irradiation (Fig 3) and by the heating of TEL its optical density increases. This was assumed to be due to the increase of the HED content; this assumption was confirmed both by means of polarographic- and also by chemical methods. There are 3 figures and 7 references, 2 of which are Soviet.

SOV/32-25-3-14/62

5(3)
AUTHORS: Rudnevskiy, N. K., Zharkov, V. V.

TITLE: Application of the Quantitative Molecular Spectrum Analysis in Several Stages of the Production of Phenol and Acetone (Primeneniye kolichestvennogo molekulyarnogo spektral'nogo analiza na nekotorykh stadiyakh proizvodstva fenola i atsetona)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 297-298 (USSR)

ABSTRACT: This paper was read at the XII Vsesoyuznoye soveshchaniye po spektroskopii (Twelfth All-Union Congress for Spectroscopy) in Moscow in November 1958. At present, phenol together with acetone is being produced by the catalytic decomposition of isopropyl hydrogen peroxide (I) which is obtained by cumene oxidation. A method of the quantitative determination of (I), dimethyl-phenylcarbinol (II), and acetophenone (III) in technical hydrogen peroxide from the infrared adsorption spectra is described. The absorption spectra were obtained by means of a mirror-monochromator ZMR-2 and a NaCl-prism. (I) was determined at an absorption wave length $\lambda = 11.98\ \mu$ (Fig), whereas (II) was determined at $\lambda = 11.55\ \mu$ and (III) at $\lambda = 5.92\ \mu$. The determinations were carried out by means of corresponding calculation formulas and calibration diagrams. Tests with

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Application of the Quantitative Molecular Spectrum Analysis in Several Stages of the Production of Phenol and Acetone

artificial mixtures and according to gravimetric analyses showed that the error of determination is ± 1.7% for (I), 1.5% for (II), and ± 5% for (III).
There are 1 figure and 7 references, 3 of which are Soviet.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet (Gor'kiy State University)

Card 2/2

BYKOVA, T.V.; ROMANOVA, L.Ya.; RUDNEVSKIY, N.K.; KHOKHLOV, G.Ya.; YAKOVLEV, B.M.

Spectral method of determining bismuth in wrought iron. Zav.lab. 27 no.3:315 '61. (MIRA 14:3)

1. Gor'kovskiy avtomobil'nyy zavod.
(Bismuth—Spectra)
(Cast iron)

ACC NR: AP7003155 SOURCE CODE: UR/0368/66/005/006/0793/0794

AUTHOR: Obukhova, Ye. S.; Pikhtelev, A. I.; Rudnevskiy, N. K.

ORG: none

TITLE: Spectral investigations of a rubidium light source

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 6, 1966, 793-794

TOPIC TAGS: rubidium, optic pumping, electric lamp, signal to noise ratio, optic spectrum, hyperfine structure, temperature dependence, pressure effect

ABSTRACT: To obtain an optical pumping source suitable for use in precision magnetometers and in frequency standards, the authors investigated the spectra of electrodeless rubidium lamps similar to those described by W. E. Bell et al. (Rev. Sci. Instrum. v. 32, no. 6, 688, 1961). Rb^{87} was used as the working gas and Kr and Ar as buffers. The exciting-generator frequency was 90 - 100 MHz. The tests consisted of determining the fine-structure components of the various lines present in the spectrum of the lamp (besides the main 7800 and 7947 Å doublet), which affect adversely the signal/nois ratio, the dependence of the line intensities on the voltage applied to the lamp, the effect of different argon and krypton pressures, and the variation of the half-width and intensity of the hyperfine components of the main doublet as functions of the voltage and temperature. The latter tests have shown that a change of voltage from 90 to 150 v (corresponding to an increase in power from 3 to 8 watts) changes the line width by not more than a factor of 2, while the line intensity is

UDC: 535.89

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ACC NR: AP7003155

increased by a factor 4 - 5. When the line width more than doubles, self reversal sets in, and this reduces the usefulness of the lamp. The higher the voltage, the lower the temperature at which self-reversal sets in (it ranges from 110 to 60C as the voltage is changed from 100 to 150 v). The lamp becomes unstable at voltages above 190. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 15Nov65/ OTH REF: 002/ ATD PRESS: 5113

Card 2/2

L 5445-66 EWT(l)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2/EWP(t)/EWP(b)
ACC NR: AP5025094 IJP(c) JD/AT SOURCE CODE: UR/0368/65/003/003/0265/0267

AUTHORS: Rudnevskiy, N. K.; Maksimov, D. Ye.

ORG: none

TITLE: Use of discharge in a hollow cathode for the quantitative spectral determination of elemental cadmium excess in cadmium sulfide and of zinc in zinc sulfide

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 265-267

TOPIC TAGS: spectrum emission analysis, spectrum analysis, spectrometry, cadmium, zinc, cadmium sulfide, zinc sulfide

ABSTRACT: A method for the quantitative determination of super-stoichiometric components in binary semiconductor compounds is described. The method is based on the different rate of vaporization of salt and metal in a hot hollow cathode discharge. The method was tested on Cd + CdS and Zn + ZnS specimens of known composition. The experimental results are shown graphically (see Fig. 1). It was found that the sensitivity of the determination was 10^{-2}%.

Card 1/2 UDC: 543.42

0901 0934

L 5445-66

ACC NR: AP5025094

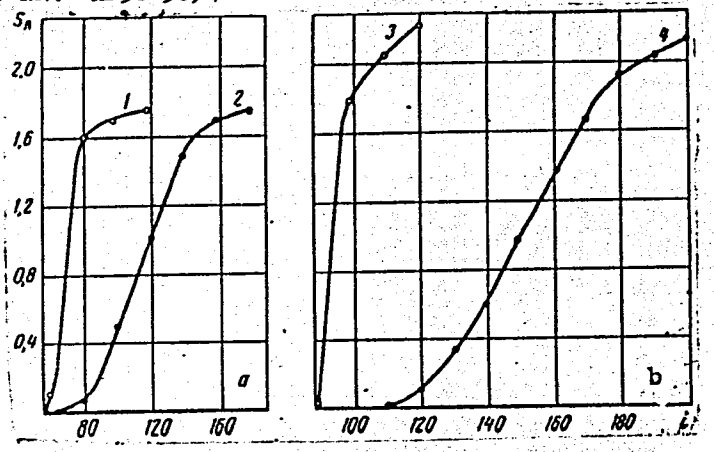

Fig. 1. Dependence of line density CdI 228.02Å (a) and ZnII 2502.00 Å (b) on the current strength (ma) at 25 mm Hg of He pressure; 1 and 3 metallic cadmium and zinc respectively; 2 and 4 sulfides of cadmium and zinc respectively.

Orig. art. has: 1 graph.

SUB CODE: OP/ SUBM DATE: 17May65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 md

MALKOVA, O.P.; TUMANOVA, A.N.; RUDNEVSKIY, N.K.

Determination of boron in germanium and germanium films by the spectrographic method. Zhur. anal. khim. 20 no.1:130-132 '65. (MIRA 18:3)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete imeni Lobachevskogo.

MALKOVA, O.P.; ZHUKOVA, A.N.; RUDNEVSKIY, N.K.

Chemical-spectral method of determining boron in germanium and germanium films. Trudy po khim.i khim.tekh. no.1:188 '63.
(MIRA 17:12)

[illegible], D.S.; [illegible], Yu.S.; RUDNEVSKIY, N.K.; TARASOV, P.I.

Spectral analysis of aluminum alloys with electric spark excitation and pulsed contact sampling. Zav. lab. 30 no. [illegible] : 132-[illegible] '64 (MIRA 18:1)

1. Nauchno-issledovatel'skiy institut pri Gor'kovskom gosudarstvennom universitete.

MILENINA, D.P.; RUDNEVSKIY, N.K.; SAFONEYEVA, T.M.

Intensity of aluminum and zinc lines in contact-pulse sampling of the Al-Zn alloy as dependent on concentration. Trudy po khim.i khim.tekh. no.1:8-11 '63. (MIRA 17:12)

DRYAKHLOV, A.I.; RUDNEVSKIY, N.K.

Periodicity of sparking curves. Trudy po khim.i khim.tekh. no.1:12-17 '63. (MIRA 17:12)

OBUKHOVA, Ye.S.; RUDNEVSKIY, N.K.

Particularities of the feeding of substance of Al-Zn alloys into the alternating current arc discharge and the concentration dependence of the intensity of aluminum and zinc lines. Trudy po khim.i khim.tekh. no.1:43-46 '63. (MIRA 17:12)

L 49768-65 EPF(c)/EWP(j)/EWT(m) Pc-4/Pr-4 RM
ACCESSION NR: AR5012251 UR/0058/65/000/003/D033/D033

SOURCE: Ref. zh. Fizika, Abs. 3D238

AUTHORS: Vyshinskiy, N. N.; Kozlova, T. V.; Rudnevskiy, N. K.

TITLE: Investigation of the influence of the aggregate state and of the temperature on the vibrational infrared spectra of ethyl derivatives of silicon, germanium, and tin

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 451-459

TOPIC TAGS: infrared spectrum, vibrational spectrum, ethyl derivative, silicon, germanium, tin

TRANSLATION: Infrared spectra were investigated of seven ethyl derivatives of the type $(C_2H_5)_4M$, $(C_2H_5)_3MX$, and $(C_2H_5)_3MM(C_2H_5)_3$ (M = Si, Ge, Sn) in the temperature range from -170 to +20C. The spectra of most frozen substances were richer in the number of vibrational frequencies than the spectra of the liquids. Splitting of individual bands is observed. The character or the behavior of the absorption

Card 1/2

L 49768-65
ACCESSION NR: AR5012251

bands in the region of C=C valence vibrations upon change of the aggregate state makes it possible to conclude that there is present internal rotation of the ethyl groups around the M-C bond, and that rotational isomers are present in the considered compounds. The splitting of the absorption bands in the solid state can be attributed to lifting of the degeneracy and resolution of the Fermi-resonance components. The Davydov splitting, in the case of the investigated compounds, apparently does not take place.

SUB CODE: OP, OC ENCL: 00

BJG
Card 2/2

RUDNEVSKIY, N. K.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleyev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

O. P. Malkova, A. N. Zhukova, and N. K. Rudnevskiy. Spectrochemical determination of 6 elements in Ce thin films with a reported sensitivity of 10^{-9} to 10^{-7} g.

(Zhur. Anal. khim. 19 No. 6, 1964 p. 777-79)

VOLKOV, V.F.; VYSHINSKIY, N.N.; RUDNEVSKIY, N.K.

Vibrational and rotational spectra of trimethylchlorosilane, triethylchlorosilane, and triethylchlorostannane. Izv. AN SSSR.Ser. fiz. 26 no.10:1282-1285 O '62. (MIRA 15:10)
(Silane--Spectra) (Tin organic compounds--Spectra) (Spectrum, Molecular)

RUDNEVSKIY, N.K.; DRYAKHLOV, A.I.

New method for the spectral analysis of solutions. Zav.lab. 29 no.4:431-433 '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete.
(Spectrum analysis) (Solution (Chemistry))

RUDNEVSKIY, N.K.

PHASE I BOOK EXPLOITATION SOV/6181

Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy (Materials of the Third Ural Conference on Spectroscopy) Sverdlovsk, Metallurgizdat, 1962. 197 p. Errata slip inserted. 3000 copies printed.

Sponsoring Agencies: Institut fiziki metallov Akademii nauk SSSR. Komissiya po spektroskopii; and Ural'skiy dom tekhniki VSNTO.

Eds. (Title page): G. P. Skornyakov, A. B. Shayevich, and S. G. Bogomolov; Ed.: Gennadiy Pavlovich Skornyakov; Ed. of Publishing House: M. L. Kryzhova; Tech. Ed.: N. T. Mal'kova.

PURPOSE: The book, a collection of articles, is intended for staff members of spectral analysis laboratories in industry and scientific research organizations, as well as for students of related disciplines and for technologists utilizing analytical results.

Card 1/15

Materials of the Third Ural Conference (Cont.) SOV/6181

COVERAGE: The collection presents theoretical and practical problems of the application of atomic and molecular spectral analysis in controlling the chemical composition of various materials in ferrous and nonferrous metallurgy, geology, chemical industry, and medicine. The authors express their thanks to G. V. Chentsova for help in preparing the materials for the press. References follow the individual articles.

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Sherstkov, Yu. A., and L. P. Maksimovskiy. Investigation of the dependence of the total intensity of spectral lines on the concentration of elements in an arc-discharge plasma 4

Materials of the Third Ural Conference (Cont.) SOV/6181

Buravlev, Yu. M., M. A. Perepelkina, O. P. Neuymina, and G. I. Maramygina. Investigation of the effect of structure on the results of spectral analyses of cast iron 62

Bobrov, V. A., Ye. N. Chernoguz, and T. N. Yaroslavova. Application of "fractional exposure" method for spectral analysis of alloy cast irons and aluminum alloys 66

Matyugina, I. V. Spectral analysis of silicon brasses by the calculated graph method 67

Obukhova, Ye. S., and N. K. Rudnevskiy. Application of electrotransfer in plotting calibration graphs according to a single standard in the spectral analysis of alloys 68

Taganov, K. I. Spectroscopic investigation of features of contact-electrospark erosion of metals and alloys 70

Card 6/15

VYSHINSKIY, N.N.; ALEKSANDROV, Yu.A.; RUDNEVSKIY, N.K.

Vibrational spectra of tin and lead organic compounds and their analytical application. Izv. AN SSSR.Ser.fiz. 26 no.10:1285-1287 O '62. (MIRA 15:10)

(Tin organic compounds—Spectra) (Lead organic compounds—Spectra) (Spectrum, Molecular)

OBUKHOVA, Ye. S.; RUDNEVSKIY, N. K.; TAGANOV, K. I.

Analytic sampling by means of an electric discharge for standardization purposes in the spectrum analysis of metals and alloys. Izv. AN SSSR. Ser. fiz. 27 no.1:6-7 Ja '63. (MIRA 16:1)

(Metals--Analysis) (Electric discharges)

S/048/63/027/001/003/043
B163/B160

AUTHORS: Obukhova, Ye. S., Rudnevskiy, N. K., and Taganov, K. I.

TITLE: Electric discharge sampling for the calibration in the spectral analysis of metals and alloys

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 6-7

TEXT: I, the intensity of a spectral line depends on c the concentration of the component to be determined and on the mass consumed in the light source, which is itself dependent on the discharge current, electrode distance d, and transfer time. In intensity measurements of the PI 2535,65 Å line from binary Cu-P alloys with 0.67 - 1.33% P, and i the current in the transfer arc discharge from 2 - 8a, log I was found to be a linear function of log c I^P with P = 1.3. For constant i, log I was a linear function of log c d^P with negative P. In similar experiments with a Cu - Ni alloy S, the optical density of the Ni I 3050. 8 Å line was measured for Ni concentrations of 7.43 - 29.14% and varying T, the

Electric discharge sampling for the ... S/048/63/027/001/003/043
B163/B180

transfer time in a spark discharge. It was found that S is a linear function of c T^K (value of K not stated). This paper was presented at the 14th Conference on Spectroscopy in Gor'kiy, July 5-12, 1961. There are 4 figures.

Card 2/2

RUDNEVSKIY, N.K.; KALININ, Yu.S.

Effect of "third" elements on the line intensity in spectrum analysis of some alloys on a copper basis. Izv. AN SSSR. Ser. fiz. 26 no.7:846-848 Jl '62. (MIRA 15:8)
(Copper alloys—Spectra)

RUDNEVSKIY, N.K.; GOLITSYN, G.I.; OBUKHOVA, Ye.S.; BARINOV, V.M.

Studying the supply of matter from certain copper-based alloys into the discharge of a rectified a.c. arc. Izv. AN SSSR. Ser. fiz. 26 no.7:881-884 Jl '62. (MIRA 15:8)
(Electric arc)

ZHARKOV, V.V.; RUDNEVSKIY, N.K.

Spectroscopic study of the hydrogen bond between the molecules of tertiary butyl hydroperoxide in a tetravalent carbon solution.
Opt. i spektr. 7 no.4:479-483 Ap '62. (MIRA 15:5)
(Butyl peroxide—Spectra) (Hydrogen bonding)

S/048/62/026/007/001/030
B104/B138

AUTHORS: Rudnevskiy, N. K., and Kalinin, Yu. S.

TITLE: Influence of "third" elements on line intensity in the spectral analysis of alloys on copper base

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 7, 1962, 846-848

TEXT: The aim of this work was to assess the influence of features of the entry into the arc-discharge gas cloud, and of changes in the conditions of spectrum excitation, on the concentration dependence of the intensity of lines from ions and atoms of iron contained as impurity in Cu-Ni alloys. These contained 1.2 - 79% Ni and 0.15 - 0.42% Fe. Neglecting reabsorption, spark and arc line intensities can be described by

$$\lg \frac{I_{\text{п}}}{x} + \frac{0{,}43\,E_1}{kT} = \lg a_1' + \lg (VC), \qquad (2),$$

$$\lg \frac{I_{\text{п}}}{(1-x)} + \frac{0{,}43\,E_2}{kT} = \lg a_2' + \lg (VC).$$

Card 1/2

where x is the degree of ionization of the iron atoms, N is the number of iron particles, C is the iron concentration in the alloy, and V is the rate of entry into the gas cloud. If the change in line intensity observed with changing iron concentration were due only to V and excitation conditions (T,x), the curves drawn in the coordinates ($I'_{\mu} = \log a'_1 + \log(VC)$; $\log(VC)$) and ($I'_{\mu} = \log a'_2 + \log(VC)$; $\log(VC)$) would be straight lines. I, V, T, and x must first be determined in order to plot these curves. These quantities and their intervals under different experimental conditions are determined partly from data of other authors, and partly from the present authors' experiments. The arc line intensity of iron is shown to be a linear function of the rate of entry into the gas cloud, which is not so with spark lines. A similar result was obtained for Cu-Mn alloys. There are 3 figures.

VYSHINSKIY, N.N.; RUDNEVSKIY, N.K.

Oscillatory spectra of certain organometallic compounds of the elements of group IV. Opt. i spektr. 10 no.6:797-799 Je '61.
(Organometallic compounds--Spectra)

RUDNEVSKIY, Yu.I.; SIGALOVA, Ye.A.

Unusual case of giant retroperitoneal fibroma. Akush. i gin. no.3: 86-88 My-Je '54. (MLRA 7:8)

1. Iz akushersko-ginekologicheskoy kliniki (zav. prof. P.P.Sidorov) bol'nitsy imeni K.Ye. Voroshilova (glavnyy vrach N.I.Lyutaya)

(ABDOMEN, neoplasms,
*fibroma, giant retroperitoneal)
(FIBROMA,
*retroperitoneal, giant)

LANDAU, Ya.M., dotsent; SIGALOV, A.B.; KARPUSHIN, V.P.; MIROSHNICHENKO, V.P.; RUDNEVSKIY, Yu.I.

Physiological blood loss in the puerperal period of normal labor. Sov.med. 24 no.3:89-94 Mr '60. (MIRA 14:3)

1. Iz akushersko-ginekologicheskoy kliniki (zav. prof. P.P.Sidorov) Stalinskogo meditsinskogo instituta (dir. - dotsent A.M.Ganichkin).
(PUERPERIUM)

AVERSHIN, S.G., prof., dokt.tekhn.nauk; ANAN'IN, G.P., dotsent, kand.tekhn. nauk; BARANOV, A.I., dotsent, inzh.; BERLIN, A.Ye., inzh.; BOCHKAREV, V.G., kand.tekhn.nauk; BUTKEVICH, R.V., kand.tekhn.nauk; VESELOVSKIY, V.S., prof.,doktor tekhn.nauk; VESKOV, M.I., kand. tekhn.nauk; VOL'KENAU, A.V., kand.tekhn.nauk; GAMKAVI, S.M., kand.tekhn.nauk; GORBACHEV, T.F.; DAVIDYANTS, V.T., kand.tekhn.nauk; DMITRIYEV, M.F., kand.tekhn.nauk; DOBROVOL'SKIY, V.V., kand.tekhn.nauk; DUKALOV, M.F., kand.tekhn.nauk; ZAYTSEV, N.A.; ZARANKIN, P.S., inzh.; ZVYAGIN, P.Z., dotsent, kand.tekhn.nauk; IL'SHTEYN, A.M., kand.tekhn. nauk; KILYACHKOV, A.P., dotsent, kand.tekhn.nauk; KIRICHENKO, I.P., inzh.; KRUPENNIKOV, G.A., kand.tekhn.nauk; KUZNETSOV, S.T., kand. tekhn.nauk; KUCHERSKIY, L.V., kand.tekhn.nauk; LINDENAU, N.I., inzh.; LIPKOVICH, dotsent, kand.tekhn.nauk; LOKSHIN, B.S., kand.tekhn.nauk; MURATOV, M.L., dotsent, kand.tekhn.nauk; MUCHNIK, V.S., prof., doktor tekhn.nauk; NAYDISH, A.M., dotsent, kand.tekhn.nauk; NEKRASOVSKIY, Ya.E., prof., doktor tekhn.nauk; NEKHAYEV, G.A., inzh.; NUROK, G.A., prof., doktor tekhn.nauk; OVINOV, M.I., inzh.; PORTNOV, A.A., inzh.; PROSKURIN, V.V., dotsent, kand.tekhn.nauk; RUDNEV, B.A., inzh.; SAPITSKIY, K.F., kand.tekhn.nauk; SELETSKIY, R.A., dotsent, kand.tekhn.nauk; SEMENOV, A.P., kand.tekhn.nauk; SKAFA, P.V., inzh.; SONIN, S.D., prof.; SUDOPLATOV, A.P., prof., doktor tekhn.nauk; TIMOSHEVICH, V.A., inzh.; FUHMAN, A.A., inzh.; CHINAKAL, N.A.; SHAKHMEYSTER, L.G., dotsent, kand.tekhn.nauk; TERPIGOREV, A.M., glavnyy red.; LOZNEVA, A.A., red.; NAUMKIN, I.F., red.; OSTROVSKIY, S.B., red.; PANOV, A.D., red.; STUGAREV, A.S., red.; SHELKOV, A.A.,

(Continued on next card)

AVERSHIN, S.G.---(continued) Card 2.
red.; ARKHANGEL'SKIY, A.S., kand.tekhn.nauk, red.; REZNIKOV, G.A., inzh., red.; ALESHIN, M.I., red.izd-va; KACHALKINA, Z.I., red. izd-va; PROZOROVSKAYA, V.L., tekhn.red.; NADEINSKAYA, A.A., tekhn.red.

[Mining; an encyclopedic handbook] Gornoe delo; entsiklopedicheskii spravochnik. Glav. red. A.M. Terpigorev. Chleny glav.red.: F.A. Barabanov i dr. Vol.5 [Underground coal mining] Razrabotka ugol'nykh mestorozhdenii podzemnym sposobom. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po ugol'noi promyshl. 1958. 447 p. (MIRA 12:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Gorbachev, Chinakal).
2. Chlen-korrespondent Akademii nauk USSR (for Zaytsev).
(Coal mines and mining)

Rudnev, D. F.

✓Spraying with solutions of DDT and chlordan against forest-demaging insects. D. F. Rudnev and V. O. Lozinskii. *Dopovidi Akad. Nauk Ukrain. R.S.R.* 1954, No. 3, 199–203(Russian summary, 204).—Spraying with mineral-oil solns. (DDT, 5–10% chlordan, 4%) from the ground or airplane is effective against various destructive insects attacking forest plantings. For deciduous varieties the norm is approx. 20–60 l./ha., for coniferous, up to 100 l.

B. Gutoff

CII (1)

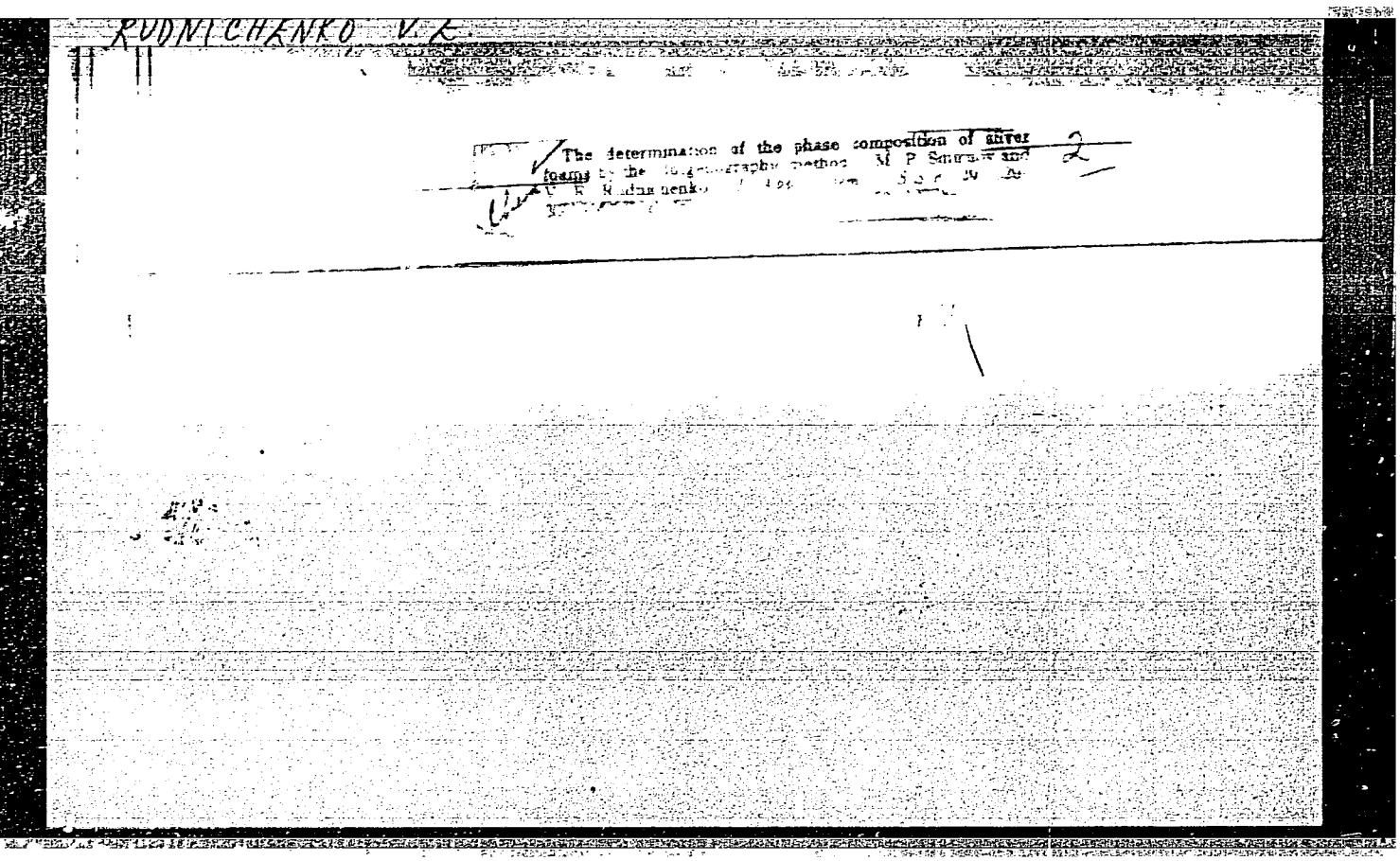
KOVRIGINA, M.; NESMEYANOV, A.; BAKULEV, I.; KOCHERGIN, I.; OPARIN, A.; ANICHKOV, N.; NESTEROV, A.; KROTKOV, F.; CHKHIKOGOVSKIY, V.; TIMAKOV, V.; SEVERIN, S.; RUDNEY, G.; SERGIYEV, P.; DOVYDOVSKIY, I.; ORBKHOVICH, V.; TALYZIN, F.; STRUKOV, A.; MIGUNOV, B.; SKVORTSOV, M.

A.I. Abrikosov; obituary. Vest. AN SSSR 25 no.5:65-66 My '55.
(Abrikosov, Aleksei Ivanovich, 1875-1955) (MLRA 8:7)

RUDNICHENKO, V. E.

18 1-4E2c

X-Ray Investigation of the Phase Composition of Lead-Calcium Alloys. M. P. Smirnov and V. E. Rudnichenko (*Analiz Rud Tsvetnykh Metal. i Produktov Ikh Pererabotki*, 1956, (12), 150-162; *C. Abs.*, 1957, 51, 5670).—[In Russian]. The work was undertaken to study the mechanism of Bi-removal process. The X-ray investigations show that Ca forms three alloys: (*a*) Pb-Ca (72% Pb), m.p. 1110° C.; (*b*) Pb-Ca (83·8% Pb), m.p. 950° C.; and (*c*) $CaPb_3$ (83·05% Pb), m.p. 670° C. The X-ray analysis confirms that Ca in the Pb-Ca alloys appears as $CaPb_3$, which acts in the process of Bi removal. The rapid X-ray method of $CaPb_3$ detn. is described.



RUDNICHENKO V.E.

The determination of the phase composition of silver